

**WHAT IS CLAIMED IS:**

1           1. A method for adding a participant to a  
2 conference call, said method comprising:  
3           in response to a multipoint controller receiving a  
4 request to extend an invitation to an ongoing  
5 conference call to a first terminal:  
6           establishing a Call Optimization Application  
7           (COA) channel between a Multipoint  
8           Controller-Call Optimization Application  
9           (MC-COA) and a Call Optimization  
10          Application co-resident with the first  
11          terminal (Terminal-COA), said establishing  
12          a COA channel effected via instant  
13          messaging following an address resolution;  
14          exchanging cost information data between the  
15          Terminal-COA and the MC-COA;  
16          determining an optimal media transport channel  
17          origination strategy in response to the  
18          cost information data;  
19          sending the Terminal-COA an invitation to join  
20          the conference call, said invitation  
21          having associated information consonant  
22          with the optimal media transport channel  
23          origination strategy;  
24          receiving, with the MC-COA, a message from the  
25          Terminal-COA containing human user input  
26          received in response to the invitation to  
27          join; and  
28          responding to the message containing the human  
29          user input.

1           2.    The method of Claim 1, wherein said  
2    establishing a Call Optimization Application (COA)  
3    channel further includes:  
4           obtaining a connection address of the terminal to be  
5           added; and  
6           associating the connection address with a non-media-  
7           transport-channel-supporting connection  
8           address, wherein the non-media-transport-  
9           channel-supporting connection address includes  
10          an instant messaging service identifier.

1           3.    The method of Claim 1, wherein said  
2    establishing a Call Optimization Application (COA)  
3    channel further includes:  
4           establishing an instant messaging connection.

1           4.    The method of Claim 1, wherein said exchanging  
2    cost information data between the Terminal-COA and the  
3    MC-COA further includes:  
4           gathering, with the Terminal-COA, cost information  
5           related to the first terminal originating the  
6           media transport channel.

1           5.    The method of Claim 1, wherein said exchanging  
2    cost information data between the Terminal-COA and the  
3    MC-COA further includes:  
4           gathering, with the MC-COA, cost information related  
5           to the multipoint controller originating the  
6           media transport channel.

1           6.    The method of Claim 1, wherein said exchanging  
2    cost information data between the Terminal-COA and the  
3    MC-COA further includes:

4           sending, over the COA channel, cost information  
5           related to the first terminal originating the  
6           media transport channel.

1           7.   The method of Claim 1, wherein said determining  
2   an optimal media transport channel origination strategy  
3   in response to the cost information data further  
4   includes:  
5           the multipoint controller comparing cost  
6           information.

1           8.   The method of Claim 1, wherein said sending the  
2   Terminal-COA an invitation to join the conference call,  
3   said invitation having associated information consonant  
4   with the optimal media transport channel origination  
5   strategy further includes:  
6           sending a request that the first terminal originate  
7           a media transport channel with the multipoint  
8           controller, if it has been determined to be  
9           most cost effective for the first terminal to  
10          originate the media transport channel.

1           9.   The method of Claim 1, wherein said sending the  
2   Terminal-COA an invitation to join the conference call,  
3   said invitation having associated information consonant  
4   with the optimal media transport channel origination  
5   strategy further includes:  
6           sending a request that the first terminal originate  
7           a media transport channel with the multipoint  
8           controller, unless specific instructions not to  
9           send the request have been received.

1           10.  The method of Claim 1, wherein said sending the  
2   Terminal-COA an invitation to join the conference call,

3 said invitation having associated information consonant  
4 with the optimal media transport channel origination  
5 strategy further includes:  
6 sending a token having at least one field selected  
7 from the group comprising a token ID field, a  
8 conference ID field, a network address field, a  
9 password field, a call initiator field, and an  
10 other conference call participants' names  
11 field.

1 11. The method of Claim 1, wherein said receiving,  
2 with the MC-COA, a message from the Terminal-COA  
3 containing human user input received in response to the  
4 invitation to join further includes:  
5 receiving a message that the human user has rejected  
6 the invitation.

1 12. The method of Claim 1, wherein said responding  
2 to the message containing the human user input further  
3 includes:  
4 sending a message from the MC-COA to the multipoint  
5 controller informing the multipoint controller  
6 that the invitation to join the conference call  
7 has been rejected.

1 13. The method of Claim 1, wherein said receiving,  
2 with the MC-COA, a message from the Terminal-COA  
3 containing human user input received in response to the  
4 invitation to join further includes:  
5 receiving a message that the human user has accepted  
6 the invitation to join but has declined a  
7 request to initiate a media transport channel.

1           14. The method of Claim 13, wherein said responding  
2 to the message containing the human user input further  
3 includes:  
4           sending a message from the MC-COA to the multipoint  
5           controller informing the multipoint controller  
6           that the multipoint controller is to originate  
7           a media transport channel with the first  
8           terminal, in response to the message that the  
9           human user has accepted the invitation to join  
10          but has declined a request to initiate a media  
11          transport channel.

1           15. The method of Claim 1, wherein said receiving,  
2 with the MC-COA, a message from the Terminal-COA  
3 containing human user input received in response to the  
4 invitation to join further includes:  
5           receiving a message that the human user has accepted  
6           the invitation to join and has accepted a  
7           request to initiate a media transport channel.

1           16. The method of Claim 15, wherein said responding  
2 to the message containing the human user input further  
3 includes:  
4           sending a message from the MC-COA to the multipoint  
5           controller informing the multipoint controller  
6           that the first terminal will be calling in "as  
7           if" first terminal were joining a "meet-me"  
8           conference call, in response to the message  
9           that the human user has accepted the request to  
10          initiate the media transport channel.

1           17. The method of Claim 15, wherein said responding  
2 to the message containing the human user input further  
3 includes:

4        sending a message from the MC-COA to the multipoint  
5        controller informing the multipoint controller  
6        that the first terminal will be calling in and  
7        authenticating itself with token information,  
8        in response to the message that the human user  
9        has accepted the request to initiate the media  
10       transport channel.

1       18. The method of Claim 17, wherein the token  
2       information is unique to the first terminal and provides  
3       a security mechanism such that access to the conference  
4       call is controlled.

1           19. The method of Claim 15, wherein said responding  
2 to the message containing the human user input further  
3 includes:  
4           sending a message from the MC-COA to the multipoint  
5           controller informing the multipoint controller  
6           that the first terminal will be calling in and  
7           authenticating itself with token information,  
8           and that the first terminal desires to bill the  
9           call against another entity, in response to the  
10          message that the human user has accepted the  
11          request to initiate the media transport  
12          channel.

1       20. A system comprising:  
2       means, responsive to a multipoint controller  
3       receiving a request to extend an invitation to  
4       an ongoing conference call to a first terminal,  
5       for:  
6       establishing a Call Optimization Application  
7       (COA) channel between a Multipoint  
8       Controller-Call Optimization Application  
9       (MC-COA) and a Call Optimization  
10      Application co-resident with the first  
11      terminal (Terminal-COA), said means for  
12      establishing a COA channel effected via  
13      instant messaging following an address  
14      resolution;  
15      exchanging cost information data between the  
16      Terminal-COA and the MC-COA;  
17      determining an optimal media transport channel  
18      origination strategy in response to the  
19      cost information data;  
20      sending the Terminal-COA an invitation to join  
21      the conference call, said invitation  
22      having associated information consonant  
23      with the optimal media transport channel  
24      origination strategy;  
25      receiving, with the MC-COA, a message from the  
26      Terminal-COA containing human user input  
27      received in response to the invitation to  
28      join; and  
29      responding to the message containing the human  
30      user input.

1       21. The system of Claim 20, further comprising:  
2       a network server computer having the system; and



3       said network server computer including at least one  
4       processor and at least one memory.

1       22. The system of Claim 20, wherein said means for  
2       establishing a Call Optimization Application (COA)  
3       channel further includes:

4       means for obtaining a connection address of the  
5       terminal to be added; and

6       means for associating the connection address with a  
7       non-media-transport-channel-supporting  
8       connection address, wherein the non-media-  
9       transport-channel-supporting connection address  
10      includes an instant messaging service  
11      identifier.

1       23. The system of Claim 20, wherein said means for  
2       establishing a Call Optimization Application (COA)  
3       channel further includes:

4       means for establishing an instant messaging  
5       connection.

1       24. The system of Claim 20, wherein said means for  
2       exchanging cost information data between the Terminal-COA  
3       and the MC-COA further includes:

4       means for gathering, with the Terminal-COA, cost  
5       information related to the first terminal  
6       originating the media transport channel.

1       25. The system of Claim 20, wherein said means for  
2       exchanging cost information data between the Terminal-COA  
3       and the MC-COA further includes:

4       means for gathering, with the MC-COA, cost  
5       information related to the multipoint  
6       controller originating the media transport  
7       channel.

1           26. The system of Claim 20, wherein said means for  
2 exchanging cost information data between the Terminal-COA  
3 and the MC-COA further includes:

4           means for sending, over the COA channel, cost  
5 information related to the first terminal  
6 originating the media transport channel.

1           27. The system of Claim 20, wherein said means for  
2 determining an optimal media transport channel  
3 origination strategy in response to the cost information  
4 data further includes:

5           means for the multipoint controller to compare cost  
6 information.

1           28. The system of Claim 20, wherein said means for  
2 sending the Terminal-COA an invitation to join the  
3 conference call, said invitation having associated  
4 information consonant with the optimal media transport  
5 channel origination strategy further includes:

6           means for sending a request that the first terminal  
7 originate a media transport channel with the  
8 multipoint controller, if it has been  
9 determined to be most cost effective for the  
10 first terminal to originate the media transport  
11 channel.

1           29. The system of Claim 20, wherein said means for  
2 sending the Terminal-COA an invitation to join the  
3 conference call, said invitation having associated  
4 information consonant with the optimal media transport  
5 channel origination strategy further includes:

6           means for sending a request that the first terminal  
7 originate a media transport channel with the  
8 multipoint controller, unless specific

9 instructions not to send the request have been  
10 received.

1 30. The system of Claim 20, wherein said means for  
2 sending the Terminal-COA an invitation to join the  
3 conference call, said invitation having associated  
4 information consonant with the optimal media transport  
5 channel origination strategy further includes:  
6 means for sending a token having at least one field  
7 selected from the group comprising a token ID  
8 field, a conference ID field, a network address  
9 field, a password field, a call initiator  
10 field, and an other conference call  
11 participants' names field.

1 31. The system of Claim 20, wherein said means for  
2 receiving, with the MC-COA, a message from the Terminal-  
3 COA containing human user input received in response to  
4 the invitation to join further includes:  
5 means for receiving a message that the human user  
6 has rejected the invitation.

1 32. The system of Claim 20, wherein said means for  
2 responding to the message containing the human user input  
3 further includes:  
4 means for sending a message from the MC-COA to the  
5 multipoint controller informing the multipoint  
6 controller that the invitation to join the  
7 conference call has been rejected.

1 33. The system of Claim 20, wherein said means for  
2 receiving, with the MC-COA, a message from the Terminal-  
3 COA containing human user input received in response to  
4 the invitation to join further includes:

5 means for receiving a message that the human user  
6 has accepted the invitation to join but has  
7 declined a request to initiate a media  
8 transport channel.

1 34. The system of Claim 33, wherein said means for  
2 responding to the message containing the human user input  
3 further includes:

4 means for sending a message from the MC-COA to the  
5 multipoint controller informing the multipoint  
6 controller that the multipoint controller is to  
7 originate a media transport channel with the  
8 first terminal, in response to the message that  
9 the human user has accepted the invitation to  
10 join but has declined a request to initiate a  
11 media transport channel.

1 35. The system of Claim 20, wherein said means for  
2 receiving, with the MC-COA, a message from the Terminal-  
3 COA containing human user input received in response to  
4 the invitation to join further includes:

5 means for receiving a message that the human user  
6 has accepted the invitation to join and has  
7 accepted a request to initiate a media  
8 transport channel.

1 36. The system of Claim 35, wherein said means for  
2 responding to the message containing the human user input  
3 further includes:

4 means for sending a message from the MC-COA to the  
5 multipoint controller informing the multipoint  
6 controller that the first terminal will be  
7 calling in "as if" first terminal were joining  
8 a "meet-me" conference call, in response to the

9 message that the human user has accepted the  
10 request to initiate the media transport  
11 channel.

1 37. The system of Claim 35, wherein said means for  
2 responding to the message containing the human user input  
3 further includes:

4 means for sending a message from the MC-COA to the  
5 multipoint controller informing the multipoint  
6 controller that the first terminal will be  
7 calling in and authenticating itself with token  
8 information, in response to the message that  
9 the human user has accepted the request to  
10 initiate the media transport channel.

11 38. The system of Claim 37, wherein the token  
12 information is unique to the first terminal and provides  
13 a security mechanism such that access to the conference  
14 call is controlled.

1 39. The system of Claim 35, wherein said means for  
2 responding to the message containing the human user input  
3 further includes:

4 means for sending a message from the MC-COA to the  
5 multipoint controller informing the multipoint  
6 controller that the first terminal will be  
7 calling in and authenticating itself with token  
8 information, and that the first terminal  
9 desires to bill the call against another  
10 entity, in response to the message that the  
11 human user has accepted the request to initiate  
12 the media transport channel.

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1           40. A method for adding a participant to a  
2 conference call, said method comprising:  
3           in response to a multipoint controller receiving a  
4           request to extend an invitation to an ongoing  
5           conference call to a first terminal, attempting  
6           to establish, via instant messaging services, a  
7           Call Optimization Application (COA) channel  
8           between a Multipoint Controller-Call  
9           Optimization Application (MC-COA) and a Call  
10          Optimization Application co-resident with the  
11          first terminal (Terminal-COA).

1           41. The method of Claim 40, wherein said attempting  
2 to establish, via instant messaging services, a Call  
3 Optimization Application (COA) channel further comprises:  
4           determining that the COA channel cannot be  
5           established; and  
6           informing the multipoint controller that Call  
7           Optimization is unavailable, whereby  
8           substantially backwards compatibility with  
9           existing communications systems is achieved.

1           42. A system comprising:  
2           means, responsive to a multipoint controller  
3           receiving a request to extend an invitation to  
4           an ongoing conference call to a first terminal,  
5           for attempting to establish, via instant  
6           messaging services, a Call Optimization  
7           Application (COA) channel between a Multipoint  
8           Controller-Call Optimization Application (MC-  
9           COA) and a Call Optimization Application co-  
10          resident with the first terminal (Terminal-  
11          COA).

1        43. The system of Claim 42, further comprising:  
2        a network server computer having the system; and  
3        said network server computer including at least one  
4        processor and at least one memory.

1        44. The system of Claim 42, wherein said means for  
2        attempting to establish, via instant messaging services,  
3        a Call Optimization Application (COA) channel further  
4        comprises:

5        means for determining that the COA channel cannot be  
6        established; and

7        means for informing the multipoint controller that  
8        Call Optimization is unavailable, whereby  
9        substantially backwards compatibility with  
10       existing communications systems is achieved.

1        45. A method for accepting an invitation to an  
2        ongoing conference call, said method comprising:  
3        receiving, with a Call Optimization Application co-  
4        resident with a first terminal (Terminal-COA),  
5        an invitation to the first terminal to join an  
6        ongoing conference call over a Call  
7        Optimization Application (COA) channel  
8        established via instant messaging services; and  
9        responding to the invitation to join in response to  
10       human user input to an interface activated in  
11       response to the invitation.

1        46. The method of Claim 45, wherein said receiving,  
2        with a Call Optimization Application co-resident with a  
3        first terminal (Terminal-COA), an invitation to the first  
4        terminal to join an ongoing conference call over a Call  
5        Optimization Application (COA) channel established via  
6        instant messaging services further includes:

7 receiving a token having at least one field selected  
8 from the group comprising a token ID field, a  
9 conference ID field, a network address field, a  
10 password field, a call initiator field, and an  
11 other conference call participants' names  
12 field.

1 47. The method of Claim 45, wherein said receiving,  
2 with a Call Optimization Application co-resident with a  
3 first terminal (Terminal-COA), an invitation to the first  
4 terminal to join an ongoing conference call over a Call  
5 Optimization Application (COA) channel established via  
6 instant messaging services further includes:  
7 gathering cost information related to the first  
8 terminal originating a media transport channel  
9 with a multipoint controller; and  
10 sending a message containing the cost information  
11 from the Terminal-COA to a Multipoint-  
12 Controller Call Optimization Application (MC-  
13 COA) over the COA channel.

1 48. The method of Claim 45, wherein said responding  
2 to the invitation to join in response to human user input  
3 to an interface activated in response to the invitation  
4 further includes:  
5 sending a message containing the human user input  
6 from the Terminal-COA to a Multipoint-  
7 Controller Call Optimization Application (MC-  
8 COA) over the COA channel.

1 49. The method of Claim 45, wherein said responding  
2 to the invitation to join in response to human user input  
3 to an interface activated in response to the invitation  
4 further includes:



5       activating an interface which presents at least one  
6       invitation option selected from the group  
7       comprising accepting or rejecting an invitation  
8       to join an ongoing conference call, accepting  
9       the invitation to join the ongoing conference  
10      call but rejecting an invitation to originate a  
11      media transport channel, and accepting the  
12      invitation to join the ongoing conference call  
13      and accepting the invitation to originate the  
14      media transport channel.

1       50. The method of Claim 45, wherein said responding  
2      to the invitation to join in response to human user input  
3      to an interface activated in response to the invitation  
4      further includes:  
5        sending a message indicative of the human user input  
6        from the Terminal-COA to a Multipoint  
7        Controller-Call Optimization Application (MC-  
8        COA) over the COA channel.

1       51. The method of Claim 45, wherein said responding  
2      to the invitation to join in response to human user input  
3      to an interface activated in response to the invitation  
4      further includes:  
5        causing, with the Terminal-COA, the first terminal  
6        to originate a media transport channel with a  
7        multipoint controller and authenticate itself  
8        as if it were a "meet-me" conference call, in  
9        response to user input indicating that an  
10      invitation to join an ongoing conference call  
11      has been accepted and that a request that the  
12      first terminal originate the media transport  
13      channel has been accepted.

1           52. The method of Claim 51, further comprising:  
2           the first terminal authenticating itself by  
3           presenting token information, received by the  
4           Terminal-COA from the MC-COA, to the multipoint  
5           controller.

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1           53. A system comprising:  
2           means for receiving, with a Call Optimization  
3           Application co-resident with a first  
4           terminal (Terminal-COA), an invitation to  
5           the first terminal to join an ongoing  
6           conference call over a Call Optimization  
7           Application (COA) channel established via  
8           instant messaging services; and  
9           means for responding to the invitation to join  
10          in response to human user input to an  
11          interface activated in response to the  
12          invitation.

1           54. The system of Claim 53, further comprising:  
2           a workstation computer having the system; and  
3           said workstation computer having at least one  
4           processor and at least one memory.

1           55. The system of Claim 53, wherein said means for  
2           receiving, with a Call Optimization Application co-  
3           resident with a first terminal (Terminal-COA), an  
4           invitation to the first terminal to join an ongoing  
5           conference call over a Call Optimization Application  
6           (COA) channel established via instant messaging services  
7           further includes:  
8           means for receiving a token having at least one  
9           field selected from the group comprising a  
10          token ID field, a conference ID field, a  
11          network address field, a password field, a call  
12          initiator field, and an other conference call  
13          participants' names field.

1           56. The system of Claim 53, wherein said means for  
2           receiving, with a Call Optimization Application co-

3 resident with a first terminal (Terminal-COA), an  
4 invitation to the first terminal to join an ongoing  
5 conference call over a Call Optimization Application  
6 (COA) channel established via instant messaging services  
7 further includes:  
8 means for gathering cost information related to the  
9 first terminal originating a media transport  
10 channel with a multipoint controller; and  
11 means for sending a message containing the cost  
12 information from the Terminal-COA to a  
13 Multipoint-Controller Call Optimization  
14 Application (MC-COA) over the COA channel.

1 57. The system of Claim 53, wherein said means for  
2 responding to the invitation to join in response to human  
3 user input to an interface activated in response to the  
4 invitation further includes:  
5 means for sending a message containing the human  
6 user input from the Terminal-COA to a  
7 Multipoint-Controller Call Optimization  
8 Application (MC-COA) over the COA channel.

1 58. The system of Claim 53, wherein said means for  
2 responding to the invitation to join in response to human  
3 user input to an interface activated in response to the  
4 invitation further includes:  
5 means for activating an interface which presents at  
6 least one invitation option selected from the  
7 group comprising accepting or rejecting an  
8 invitation to join an ongoing conference call,  
9 accepting the invitation to join the ongoing  
10 conference call but rejecting an invitation to  
11 originate a media transport channel, and  
12 accepting the invitation to join the ongoing

13 conference call and accepting the invitation to  
14 originate the media transport channel.

1 59. The system of Claim 53, wherein said means for  
2 responding to the invitation to join in response to human  
3 user input to an interface activated in response to the  
4 invitation further includes:

5 means for sending a message indicative of the human  
6 user input from the Terminal-COA to a  
7 Multipoint Controller-Call Optimization  
8 Application (MC-COA) over the COA channel.

1 60. The system of Claim 53, wherein said means for  
2 responding to the invitation to join in response to human  
3 user input to an interface activated in response to the  
4 invitation further includes:

5 means for causing, with the Terminal-COA, the first  
6 terminal to originate a media transport channel  
7 with a multipoint controller and authenticate  
8 itself as if it were a "meet-me" conference  
9 call, in response to user input indicating that  
10 an invitation to join an ongoing conference  
11 call has been accepted and that a request that  
12 the first terminal originate the media  
13 transport channel has been accepted.

1 61. The system of Claim 60, further comprising:  
2 means for the first terminal to authenticate itself  
3 by presenting token information, received by  
4 the Terminal-COA from the MC-COA, to the  
5 multipoint controller.

1           62. A program product comprising:  
2           signal bearing media bearing program code,  
3           responsive to a multipoint controller receiving  
4           a request to extend an invitation to an ongoing  
5           conference call to a first terminal, for:  
6           establishing a Call Optimization Application  
7           (COA) channel between a Multipoint  
8           Controller-Call Optimization Application  
9           (MC-COA) and a Call Optimization  
10          Application co-resident with the first  
11          terminal (Terminal-COA) following an  
12          address resolution;  
13          exchanging cost information data between the  
14          Terminal-COA and the MC-COA;  
15          determining an optimal media transport channel  
16          origination strategy in response to the  
17          cost information data;  
18          sending the Terminal-COA an invitation to join  
19          the conference call, said invitation  
20          having associated information consonant  
21          with the optimal media transport channel  
22          origination strategy;  
23          receiving, with the MC-COA, a message from the  
24          Terminal-COA containing human user input  
25          received in response to the invitation to  
26          join; and  
27          responding to the message containing the human  
28          user input.

1           63. The program product of Claim 62, wherein said  
2           signal bearing media further includes recordable media.

1           64. The program product of Claim 62, wherein said  
2   signal bearing media further includes transmission media.

1           65. A program product comprising:  
2   signal bearing media bearing program code,  
3       responsive to a multipoint controller receiving  
4       a request to extend an invitation to an ongoing  
5       conference call to a first terminal, for  
6       attempting to establish a Call Optimization  
7       Application (COA) channel between a Multipoint  
8       Controller-Call Optimization Application (MC-  
9       COA) and a Call Optimization Application co-  
10      resident with the first terminal (Terminal-  
11      COA).

1           66. The program product of Claim 65, wherein said  
2   signal bearing media is selected from the group  
3   comprising recordable media and transmission media.

1           67. A program product comprising:  
2   signal bearing media bearing  
3      program code for receiving, with a Call  
4      Optimization Application co-resident with  
5      a first terminal (Terminal-COA), an  
6      invitation to the first terminal to join  
7      an ongoing conference call over a Call  
8      Optimization Application (COA) channel;  
9      and  
10     program code for responding to the invitation  
11     to join in response to human user input to  
12     an interface activated in response to the  
13     invitation.

1           68. The program product of Claim 67, wherein said  
2 signal bearing media further includes:  
3           said signal bearing media selected from the group  
4           comprising recordable media and transmission  
5           media.

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